What is claimed is:

1. A method for predicting pregnancy outcome in a human female subject comprising

5   measuring the activity of MMP-9 in the follicular fluid from a follicle of a mature oocyte

and predicting from the activity of MMP-9 measured the probability of establishing

pregnancy.

2. The method of diagnosing the chances of pregnancy of claim 1, wherein the activity of

10   MMP-9 is measured by using zymography.

3. The method of diagnosing the chances of pregnancy of claim 1,wherein the diameter of

the follicles selected is not less than 17mm.

15   4. The method according to claim 1, which further comprises obtaining said follicular fluid

from said follicle of said mature oocyte.

5. A method for predicting whether implantation of a fertilized oocyte from a human

female subject will result in pregnancy in a female subject following assisted

20   reproductive technology comprising

(a) removing oocytes together with follicular fluid from a female subject;

(b) measuring the activity of MMP-9 in the follicular fluid;

(c) predicting from the activity of MMP-9 measured the probability of establishing

pregnancy by in vitro fertilization-embryo transfer and

25   (d) fertilizing oocytes from a human female subject whose MMP-9 activity is above a

predetermined threshold level.

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6. A diagnostic kit for predicting pregnancy outcome comprising a protein substrate from MMP-9

7. The diagnostic kit of diagnosing the chances of pregnancy of claim 6, wherein protein substrate is selected from the group consisting of collagen IV, collagen V, collagen VI, elastin, proteoglycan and gelatin.